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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Stefan Paul Keller-Tuberg

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EXAMINER
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CHANG, RICHARD

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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07/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/935,568

Applicant(s)

KELLER-TUBERG, STEFAN PAUL

Examiner

Richard Chang

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/10/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment and Arguments*

1. Applicant's arguments and amendment, filed on 04/10/2007, with respect to claims 13-26 have been considered but are not persuasive.

Claims 1-12 had been canceled.

-- In response to applicant's argument that the cited references does not disclose a unidirectional information flow from the multicast router to the subscriber access node over a point-to-multipoint connection (See Applicant ' Remark, page 3, 2<sup>nd</sup> paragraph), the reference US patent No. 6,285,674 B1 ("Soni et al.") clearly discloses that the LAN emulation clients (as multicast router LEC A) could either establish a point-to-point (unicast) virtual circuit connection or a point-to-multipoint (multicast) virtual circuit connection (See Fig. 1, Col. 3, lines 1-27), i.e., a unidirectional information flow from the multicast router (LEC A) may flow to the subscriber access node (user) over a point-to-multipoint connection.

-- In response to applicant's argument that the cited references does not disclose a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point connections (See Applicant ' Remark, page 3, 3<sup>rd</sup> paragraph), "Soni et al. clearly discloses that the LAN emulation clients (as multicast router LEC A) may expect to establish a bidirectional point-to-point

virtual circuit connection or a point-to-multipoint (multicast) virtual circuit connection (See Fig. 2, Col. 3, lines 28-46), i.e., a bidirectional control information may flow between the multicast router (LEC A) to the subscriber access node (user) over a point-to-point connection.that (See Fig. 1, Col. 2, lines 8-34), i.e., .

It is the examiner's position that the limitations of "a unidirectional information flow from the multicast router to the subscriber access node over a point-to-multipoint connection" and "a bidirectional flow of control data between the multicast router and each end user via the subscriber access node over separate point-to-point connections, and" as cited in claim 13 are clearly anticipated by the cited reference for the reason discussed above.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 6,285,674 B1 ("Soni et al.") in view of US patent No. 6,563,830 B1 ("Gershon et al.").

Regarding Claims 13, 17, 21 and 25, Soni et al. teach a method for providing multicast services on a network with a plurality of interfaces comprising a multicast router (LEC A), at least one subscriber access node (5 ATM switch), and a plurality of end user communications equipments (LEC B and C) (see Fig. 2), comprising of

providing a single, unidirectional multicast information flow between the multicast router (LEC A) and the subscriber access node (covered by LEC B and C) over a point-to-multipoint connection (as multicasting flow),

providing a separate bidirectional flow of control data between each of the end user communications equipments (covered by LEC B and C) and the multicast router (LEC A) via the subscriber access node (5 ATM switch) over separate point-to-point connections (ATM virtual channel),

replicating, in the subscriber access node (ATM switch), once for each of the end user equipments (covered by LEC B and C), multicast information data received over the single, unidirectional multicast information flow from the multicast router (LEC A) to form a separate unidirectional multicast information flow for each of the end user communications equipments (covered by LEC B and C).

Soni et al. teaches substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

“transmitting the multicast information data replicated in the subscriber access over respective unidirectional point-to-multipoint connections between the subscriber access node and respective ones of the end user communications”.

Gershon et al. teaches a similar ATM switching system for multicast data communication and an example wherein transmitting the separate flows of multicast information data replicated in the subscriber access over respective unidirectional point-to-multipoint connections between the subscriber access node (112) and respective ones of the end user communications equipments (114 IP multicast listener) (See Fig. 5, Col. 13, lines 43-53).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Gershon et al. with Soni et al. in order to obtain a method and apparatus for multicast in an ATM network and to take advantage of transmitting the of multicast information data copied in the subscriber access over respective unidirectional point-to-multipoint connections between the subscriber access node and respective end user communications equipment.

The motivation to do so would have been to use transmitting the of multicast information data copied in the subscriber access over respective unidirectional point-to-multipoint connections between the subscriber access node and respective end user communications equipment as a basic function in the multicast registration performance, as suggested by Gershon et al. in Col. 13, lines 43-53.

Regarding claims 16, 20 and 24, as discussed above, Soni et al. teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of "multicast router is an IP router".

Gershon et al. further teaches a similar ATM switching system for multicast data communication wherein the multicast router (within 112) is an IP router (See Fig. 4, Col. 8, lines 48-54).

At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to combine Gershon et al. with Soni et al. in order to obtain a method and apparatus for multicast in an ATM based ELAN and to take advantage of registering multicast router as an IP route.

The motivation to do so would have been to use multicast router as an IP route to implement multicast registration in an IP over ATM network, as suggested by Gershon et al. in Col. 8, lines 48-54.

Regarding claims 14, 18 and 22, as discussed above, Soni et al. further teaches that each of the unidirectional point-to-multipoint connections is an ATM multipoint connection between the subscriber access node (5) and the end user communications equipments (B, C) (See Col. 3, lines 29-47).

Regarding claims 15, 19 and 23, as discussed above, Soni et al. further teaches that each of the bidirectional point-to-point connections is an ATM point-to-point connection between the subscriber access node (5) and the end user communications equipments (B, C) (See Fig. 2, Col. 3, lines 29-47).

Regarding claim 26, as discussed above, Soni et al. further teaches that a plurality different ones of the replicated unidirectional multicast information data flows are provided simultaneously to at least some of the end user communications equipments (B, C) (See Fig. 2, Col. 2, lines 5-18).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*rk*  
rk

Richard Chang  
Patent Examiner  
Art Unit 2616

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SUPERVISORY PATENT EXAMINER